

Serial No. 10/063,754

RD-29,414-1

REMARKS

Applicants appreciate the consideration shown by the Office, as evidenced by the Office Action mailed on January 2, 2004. In that Office Action, the Examiner rejected Claims 1, 3-12, and 14-27. As such, Claims 1, 3-12, and 14-27 remain in the case with none of the claims being allowed.

The January 2 Office Action has been carefully considered. After such consideration, Claim 12 has been amended. Applicants respectfully request reconsideration of the application by the Examiner in light of the above amendments and the following remarks offered in response to the February 10 Office Action.

Claims 1, 3-12, and 14-27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Hansen et al. (U.S. Patent 5,976,247) in view of Baumler et al. (U.S. Patent 4,102,666) and in further view of JP 63-236722 (JP '722).

Applicants submit that independent Claim 12 has been amended to claim an outer coating for a body comprising fused quartz, in which the outer coating catalyzes a transition of fused quartz *within the body* to a cristobalite crystal structure. Applicants also submit that independent Claims 1 and 19 each claim a quartz article having an outer coating that catalyzes a transition of fused quartz *within the body* of the quartz article to a cristobalite crystal structure.

Applicants respectfully submit that, in order to establish a prima facie case of obviousness, the combination of references must teach or suggest all of the claim limitations of the present invention. Accordingly, Applicants submit that the combination of Hansen et al., Baumler et al., and JP '722, as proposed by the Examiner, does not teach a quartz article – or, in Claim 12, a body comprising fused quartz – in which the outer coating catalyzes a transition of fused quartz *within the body* to a cristobalite crystal structure, as claimed in independent Claims 1, 12, and 19.

Applicants submit that none of the references, either separately or in combination with each other, teach or suggest an outer coating that catalyzes a transition of fused quartz within the fused quartz *body* to a cristobalite crystal structure. Instead, as noted by the Examiner in pages 2-

Serial No. 10/063,754

RD-29,414-1

3 of the January 2 Office Action, Hansen et al., Baumler et al., and JP '722 each teach the formation of a *coating* having a cristobalite structure. As taught by each of these references, the conversion of the fused quartz to the cristobalite structure is limited to a thin surface layer of the article. Applicants further submit that, because each of Hansen et al., Baumler et al., and JP '722 teach formation of a thin coating having a cristobalite structure, the combined references teach *away* from the formation of the cristobalite structure *throughout* the fused quartz body.

Applicants further submit that in order to establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the references or to combine reference teachings. The requisite suggestion or motivation must come from the references themselves, rather than from the Applicants' specification. Obviousness cannot be established by locating references that describe various aspects of a patent applicant's invention without also providing evidence of the motivating force that would impel one skilled in the art to do what the patent applicant has done.

Accordingly, Applicants submit that there is no motivation or suggestion to combine the crucibles of Hansen et al. and Baumler et al. with the transparent quartz of JP '722. Neither Hansen et al. nor Baumler et al. provide any suggestion or teach the desirability that the crucibles disclosed therein be transparent.

Applicants therefore submit that, because the combination of references neither teaches nor suggests an outer coating that catalyzes a transition of fused quartz within the fused quartz body to a cristobalite crystal structure, the rejection of Claims 1, 3-12, and 14-27 under 35 U.S.C. §103(a) as being unpatentable over Hansen et al. in view of Baumler et al. and in further view of JP '722 is successfully overcome.

Serial No. 10/063,754

RD-29,414-1

In light of the amendment and remarks presented herein, Applicants submit that the case is in condition for immediate allowance and respectfully requests such action. If, however, any issues remain unresolved, the Examiner is invited to telephone the Applicants' counsel at the number provided below.

Respectfully submitted,



Robert P. Santandrea

Counsel for Applicants

Registration No. 45,072

Telephone: (518) 387-6304 or
(518) 387-7122

Schenectady, New York
March 31, 2004